

Application No.: 09/682,076

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. [Currently Amended] A method comprising the steps of:

(a) receiving one or more user-selected grid aligning parameters, wherein the user-selected grid aligning parameters includes ~~an estimated~~ a measure of probe feature size;

(b) aligning a grid with a first image based, at least in part, upon the one or more user-selected grid aligning parameters;

(c) generating grid alignment data based on the alignment of the grid with the first image;

(d) storing the grid alignment data in memory;

(e) retrieving the grid alignment data responsive to an indication to analyze a second image; and

(f) analyzing the second image based on the retrieved grid alignment data.

Claim 2. [Original] The method of claim 1, wherein:

the first image is generated by scanning a first probe array; and

the second image is generated by scanning the first probe array.

Claim 3. [Original] The method of claim 2, wherein:

the first image is generated by scanning the first probe array with a first excitation beam; and

the second image is generated by scanning the first probe array with a second excitation beam.

Claim 4. [Original] The method of claim 3, wherein:

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the first excitation beam has a first wavelength; and
the second excitation beam has a second wavelength different from the first wavelength.

Claim 5. [Original] The method of claim 2, wherein:
the first probe array is a spotted array.

Claim 6. [Original] The method of claim 2, wherein:
the first probe array is a synthesized array.

Claim 7. [Cancelled]

Claim 8. [Previously Presented] The method of claim 1, wherein:
the user-selected grid aligning parameters include any one or more of the group consisting of a fixed algorithm shape with easy threshold, a fixed algorithm shape with tight threshold, a variable algorithm shape with easy threshold, or a variable algorithm shape with tight threshold.

Claim 9. [Currently Amended] The method of Claim 1, wherein:
the ~~estimated~~ measure of probe feature size includes a dimension of a depositing element.

Claim 10. [Original] The method of claim 1, further comprising the step of:
(f) scanning a first probe array to generate the first and second images prior to performing step (a).

Claim 11. [Original] The method of claim 10, wherein:
the first and second images are scanned sequentially.

Claim 12. [Original] The method of claim 10, wherein:
the first and second images are scanned in parallel using two excitation beams.

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Claim 13. [Original] The method of claim 1, further comprising the steps of:

(f) retrieving the grid alignment data responsive to an indication to analyze one or more images in addition to the first and second images; and

(g) analyzing each of the one or more additional images based on the retrieved grid alignment data.

Claim 14. [Original] The method of claim 13, further comprising the steps of:

(h) receiving a user selection of a number of images to scan; and

(i) scanning the user-selected number of images.

Claim 15. [Original] The method of claim 14, further comprising the step of:

(j) receiving a user selection of one or more parameters for scanning.

Claim 16. [Original] The method of claim 15, wherein:

the one or more parameters for scanning include a gain for one or more of the user-selected number of images.

Claim 17. [Original] The method of claim 15, wherein:

the one or more parameters for scanning include an indicator of an excitation source for one or more of the user-selected number of images.

Claim 18. [Currently Amended] A computer program product, stored on a computer readable medium, comprising:

(a) a GUI manager that receives one or more user-selected grid aligning parameters, wherein the user-selected grid aligning parameters include ~~an estimated a~~ measure of probe feature size;

(b) a grid aligner that aligns a grid with a first image based, at least in part, upon the one or more user-selected grid aligning parameters; and

(c) an image analysis manager comprising

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- (i) an image analyzer that generates grid alignment data based on the alignment of the grid with the first image,
 - (ii) an image analysis data storer that stores the grid alignment data in memory, and
 - (iii) a multiple scan alignment controller that retrieves the grid alignment data responsive to an indication to analyze a second image;
- wherein the image analyzer analyzes the second image based on the retrieved grid alignment data.

Claim 19. [Original] The computer program product of claim 18, wherein:

- the first image is generated by scanning a first probe array; and
- the second image is generated by scanning the first probe array.

Claim 20. [Original] The computer program product of claim 19, wherein:

- the first image is generated by scanning the first probe array with a first excitation beam; and
- the second image is generated by scanning the first probe array with a second excitation beam.

Claim 21. [Original] The computer program product of claim 20, wherein:

- the first excitation beam has a first wavelength; and
- the second excitation beam has a second wavelength different from the first wavelength.

Claim 22. [Original] The computer program product of claim 19, wherein:

- the first probe array is a spotted array.

Claim 23. [Original] The computer program product of claim 19, wherein:

- the first probe array is a synthesized array.

Claim 24. [Cancelled]

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Claim 25. [Previously Presented] The computer program product of claim 18, wherein:

the user-selected grid aligning parameters include any one or more of the group consisting of a fixed algorithm shape with easy threshold, a fixed algorithm shape with tight threshold, a variable algorithm shape with easy threshold, or a variable algorithm shape with tight threshold.

Claim 26. [Currently Amended] The computer program product of claim 18, wherein:

the ~~estimated~~ measure of probe feature size includes a dimension of a depositing element.

Claim 27. [Currently Amended] A scanning system, comprising:

a scanner that scans a first probe array to generate a first image and a second image; and

a computer program product, comprising

(a) a GUI manager that receives one or more user-selected grid aligning parameters, wherein the user-selected grid aligning parameters includes ~~an estimated a~~ measure of probe feature size;

(b) a grid aligner that aligns a grid with the first image based, at least in part, upon the one or more user-selected grid aligning parameters; and

(c) an image analysis manager including

(i) an image analyzer that generates grid alignment data based on the alignment of the grid with the first image,

(ii) an image analysis data storer that stores the grid alignment data in memory, and

(iii) a multiple scan alignment controller that retrieves the grid alignment data responsive to an indication to analyze the second image;

wherein the image analyzer analyzes the second image based on the retrieved grid alignment data.

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Claim 28. [Original] The system of claim 27, wherein:
the first and second images are scanned sequentially.

Claim 29. [Original] The system of claim 27, wherein:
the first and second images are scanned in parallel using two excitation beams.

Claim 30. [Original] The system of claim 27, wherein:
the computer program product further includes a GUI manager that receives a user-selected number of images to scan, wherein the number is greater than one; and
the scanner scans the first probe array to generate the user-selected number of images, including the first and second images.

Claim 31. [Original] The system of claim 30, wherein:
the user-selected number of images to scan is greater than two;
the multiple scan alignment controller retrieves the grid alignment data responsive to an indication to analyze one or more images in addition to the first and second images;
and
the image analyzer analyzes at least one of the one or more additional images based on the retrieved grid alignment data.

Claim 32. [Currently Amended] A scanning system, comprising:
a scanner that scans a first probe array to generate a first image and a second image;
a computer; and
a computer program product that, when executed on the computer, performs a method comprising the steps of:
(a) a GUI manager that receives one or more user-selected grid aligning parameters, wherein the user-selected grid aligning parameters includes ~~an estimated~~ a measure of probe feature size;

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- (b) aligning a grid with the first image based, at least in part, upon the one or more user-selected grid aligning parameters;
- (c) generating grid alignment data based on the alignment of the grid with the first image,
- (d) storing the grid alignment data in memory;
- (e) retrieving the grid alignment data responsive to an indication to analyze the second image; and
- (f) analyzing the second image based on the retrieved grid alignment data.

Claim 33. [Currently Amended] A method comprising the steps of:

- (a) receiving one or more user-selected grid aligning parameters, wherein the user-selected grid aligning parameters includes ~~an estimated~~ a measure of probe feature size;
 - (b) aligning a grid with a first image based, at least in part, upon the one or more user-selected grid aligning parameters;
 - (c) generating grid alignment data based on the alignment of the grid with the first image;
 - (d) storing the grid alignment data in memory;
 - (e) retrieving the grid alignment data responsive to an indication to analyze a second image; and
 - (f) analyzing the second image based on the retrieved grid alignment data;
- wherein the first image is generated by scanning a first probe array and the second image is generated by scanning a second probe array different from the first probe array.